Space for a Sustainable Planet

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Terrestrial and ocean ecosystems are under multiple, interacting pressures. At risk are the systems that feed us, provide clean water, and productive, safe places to live. Collaborative, inclusive, and innovative science is needed on a global scale to develop and apply solutions to protect, restore, sustain and maximize ecosystem benefits and services. It is now abundantly clear that the way we confront the challenges ahead will dictate the health of the planet, and the health of people. Solutions to the current challenges must prioritize increasing the resilience of ecosystems so that they can withstand future pressures of climate change, increased demand for natural resources and ecosystem services, shifts in biodiversity, and emerging diseases. These solutions must also be equitable, recognizing and actively addressing past and current environmental injustices. A sustainable planet needs to be sustainable for all, and this will require radical changes to the way we identify problems and solutions, and the ways that we conduct our research.

Life on a Sustainable Planet, an initiative under the Smithsonian's Our Shared Future, envisions a future where humanity lives in balance with the natural world. In concert with global partners, the Smithsonian advances and inspires innovative science and discovery to further our collective understanding of how nature and human communities interact in pursuit of nature-based solutions to make Earth more sustainable for all. Space data are critical to this effort. Smithsonian scientists are on the forefront of tying ground-based observations to critical observations from space. The Smithsonian is monitoring real-time air pollution over the United States, tracking carbon capture in the tropics, studying eDNA in our oceans, and managing multiple global telescopes unlock new understandings of our planet.

Life on a Sustainable Planet also includes understanding the evolution of life and the search for life beyond our own planet. At the Smithsonian, this research includes analyzing samples from OSIRIS-Rex, studying the moons of the outer planets, and assessing the atmospheres of exoplanets.